



Billing Code: 5001-06

**DEPARTMENT OF DEFENSE**

**Office of the Secretary**

**[Transmittal No. 17-28]**

**Arms Sales Notification**

**AGENCY:** Defense Security Cooperation Agency, Department of Defense.

**ACTION:** Arms sales notice.

**SUMMARY:** The Department of Defense is publishing the unclassified text of an arms sales notification.

**FOR FURTHER INFORMATION CONTACT:** Pamela Young, (703) 697-9107, [pamela.a.young14.civ@mail.mil](mailto:pamela.a.young14.civ@mail.mil) or Kathy Valadez, (703) 697-9217, [kathy.a.valadez.civ@mail.mil](mailto:kathy.a.valadez.civ@mail.mil); DSCA/DSA-RAN.

**SUPPLEMENTARY INFORMATION:** This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 17-28 with attached Policy Justification and Sensitivity of Technology.

Dated: October 18, 2017.

**Aaron Siegel,**

*Alternate OSD Federal Register Liaison Officer,*

*Department of Defense.*



DEFENSE SECURITY COOPERATION AGENCY

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AHLINGTON, VA 22202-5438

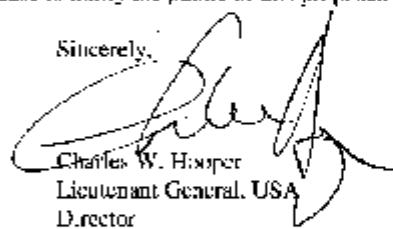
The Honorable Paul D. Ryan  
Speaker of the House  
U.S. House of Representatives  
Washington, DC 20515

OCT 06 2017

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 17-28, concerning the Missile Defense Agency's proposed Letter(s) of Offer and Acceptance to the Kingdom of Saudi Arabia for defense articles and services estimated to cost \$15 billion. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,



Charles W. Huxper  
Lieutenant General, USA  
Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology
4. Regional Balance (Classified document provided under separate cover)



Transmittal No. 17-28

Notice of Proposed Issuance of Letter of Offer  
Pursuant to Section 36(b)(1)  
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Saudi Arabia

(ii) Total Estimated Value:

Major Defense Equipment*	\$ 9 billion
Other	<u>\$ 6 billion</u>
TOTAL	\$15 billion

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:

Major Defense Equipment (MDE):

Forty-four (44) Terminal High Altitude Area Defense (THAAD) Launchers  
Three hundred sixty (360) THAAD Interceptor Missiles  
Sixteen (16) THAAD Fire Control and Communications Mobile Tactical Station Group  
Seven (7) AN/TPY-2 THAAD Radars

Non-MDE:

Also included are THAAD Battery maintenance equipment, forty-three (43) prime movers (trucks), generators, electrical power units, trailers, communications equipment, tools, test and maintenance equipment, repair and return, system integration and checkout, spare/repair parts, publications and technical documentation, personnel training and training equipment, U.S. Government and contractor technical and logistics personnel support services, facilities construction, studies, and other related elements of logistics and program support.

(iv) Military Departments: Missile Defense Agency (XX-I-WIB, XX-I-WIC); Army (XX-B-TFP, XX-B-BDP, XX-B-ZAO, XX-B-DAH, XX-B-ZAQ, XX-B-OZY, XX-B-HFA); NSA (XX-M-AAG)

(v) Prior Related Cases, if any: SR-I-WIA Basic, 2 February 2015; Amendment 1, 25 August 2016

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None

(vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Attached Annex

(viii) Date Report Delivered to Congress: October 6, 2017

\*As defined in Section 47(6) of the Arms Export Control Act.

## POLICY JUSTIFICATION

### Saudi Arabia –Terminal High Altitude Area Defense and Related Support Equipment and Services

The Government of Saudi Arabia has requested a possible sale of forty-four (44) Terminal High Altitude Area Defense (THAAD) launchers, three hundred sixty (360) THAAD Interceptor Missiles, sixteen (16) THAAD Fire Control and Communications Mobile Tactical Station Group, seven (7) AN/TPY-2 THAAD radars. Also included are THAAD Battery maintenance equipment, forty-three (43) prime movers (trucks), generators, electrical power units, trailers, communications equipment, tools, test and maintenance equipment, repair and return, system integration and checkout, spare/repair parts, publications and technical documentation, personnel training and training equipment, U.S. Government and contractor technical and logistics personnel support services, facilities construction, studies, and other related elements of logistics and program support. The estimated cost is \$15 billion.

This proposed sale will support the foreign policy and national security objectives of the United States by improving the security of a friendly country. This sale furthers U.S. national security and foreign policy interests, and supports the long-term security of Saudi Arabia and the Gulf region in the face of Iranian and other regional threats. This potential sale will substantially increase Saudi Arabia's capability to defend itself against the growing ballistic missile threat in the region. THAAD's exo-atmospheric, hit-to-kill capability will add an upper-tier to Saudi Arabia's layered missile defense architecture and will support modernization of the Royal Saudi Air Defense Force (RSADF). Saudi Arabia will have no difficulty absorbing this equipment into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principal contractors for the THAAD system are Lockheed Martin Space Systems Corporation, Dallas, TX, Camden, AR, Troy, AL and Huntsville, AL; and Raytheon Corporation, Andover, MA. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require one hundred eleven (111) contractor representatives and eighteen (18) U.S. Government personnel in country for an extended period of time.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

## Transmittal No. 17-28

Notice of Proposed Issuance of Letter of Offer  
Pursuant to Section 36(b)(1)  
of the Arms Export Control Act

Annex  
Item No. vii

(vii) Sensitivity of Technology:

1. The Terminal High Altitude Area Defense System (THAAD) Ballistic Missile Defense (BMD) System contains classified CONFIDENTIAL/SECRET components and critical/sensitive technology. The THAAD Fire Unit is a ground-based, forward deployable terminal missile defense system that represents significant technological advances. The THAAD system continues to hold a technology lead over other terminal ballistic missile systems. THAAD is the first weapon system with both endo- and exo- atmospheric capability developed specifically to defend against ballistic missiles. The higher altitude and theater-wide protection offered by THAAD provides more protection of larger areas than lower-tier systems alone. THAAD is designed to defend against short, medium, and intermediate range ballistic missiles. The THAAD system consists of four major components: Fire Control/Communications, Radar, Launchers, and Interceptor Missiles.

2. The THAAD BMD System contains sensitive/critical technology, primarily in the area of defense and production know-how and primarily inherent in the design, development and/or manufacturing data related to certain critical components. Information on operational effectiveness with respect to countermeasures and counter-countermeasures, low observable technologies, select software documentation and test data are classified up to and including SECRET.

3. The THAAD BMD System contains Controlled Cryptographic Items (CCI) that are used for both system internal links and for external communications. These items consist of key loading devices, network encryptors, secure telephones, voice radios, tactical data radios, and mission data radios. Specific CCI used for the Saudi Arabia case will be determined through the COMSEC Release Request (CRR) process, initiated through USCENTCOM once an interoperability requirement has been established. NSA will identify releasable items, in parallel with staffing and validation of the CRR by the Joint Staff. The Committee for National Security Systems (CNSS) reviews and provides final approval of the items and quantities.

4. AN/VRC-90, AN/VRC-91, AN/VRC-92 are different configurations of the Single Channel Ground and Airborne Radio System (SINCGARS) family. SINCGARS is a tactical radio providing secure jam-resistant voice and data communications of command, control, targeting, and technical information for the Terminal High Altitude Air Defense (THAAD) system. The spread-spectrum frequency hopping Electronic Counter-Counter Measures (ECCM) technology resident in the radio is sensitive but UNCLASSIFIED. While sensitive,

the frequency-hopping algorithms used to generate the ECCM waveform are unique to the country of ownership and cannot be manipulated by potential adversaries for use or interference with other countries possessing SINCGARS technology. Should a potential adversary come into possession of one of these radios, they would have the potential to intercept operational command, control, and targeting information. This potential problem is mitigated by the fact that the customer can secure information passed over the radio network using a commercial grade security capability equivalent to an Advanced Encryption Standard (AES) 256-bit encryption system whose keys are controlled by the customer country.

5. As with the SINCGARS family of radios, the AN/PRC-117 is a tactical radio providing ECCM jam-resistant secure communications for exchange of command, control, and targeting information within the THAAD system tactical radio network. ECCM capabilities are sensitive but UNCLASSIFIED and algorithms for these jam-resistant waveforms are unique to the customer country. Unlike the SINCGARS radios, the AN/PRC-117 uses Type 1 encryption. When loaded with U.S. crypto keys, the system is then CLASSIFIED up to SECRET. Should a potential adversary come into possession of one of these radios, the customer country can quickly remotely rekey remaining radios, preventing potential adversaries from understanding received command, control, and targeting information.

6. The Defense Advanced Global Positioning System (GPS) Receiver (DAGR) is a handheld GPS location device with map background displaying the user's location. Unlike commercial grade GPS receivers capable of receiving Standard Positioning Signals (SPS) from GPS satellites, the DAGR is capable of receiving Precise Positioning Signals (PPS). PPS satellite signals provide significantly more accurate location data than do SPS signals. This capability within DAGRs is possible due to the Selective Availability Anti-Spoofing Module (SAASM). The SAASM is an encrypted device permitting both receipt of PPS signals and the benefit of preventing potential adversaries from spoofing the system to display incorrect location information. The SAASM capability within the DAGR is sensitive but UNCLASSIFIED. The SAASM capabilities are sensitive due to the system's ability to access restricted PPS GPS satellite signals and to prevent spoofing. While sensitive, the ability of potential adversaries to exploit the system is limited.

7. The same SAASM capabilities resident in the DAGR are also resident in the THAAD GPS timing system. The THAAD system requires highly precise timing hacks in order accurately track and engage targets. The PPS signals generated by GPS satellites provide this precise timing information. The SAASM device resident in the timing system permits receipt of this precise PPS timing data. The SAASM is an encrypted device permitting both receipt of PPS signals and the benefit of preventing potential adversaries from spoofing the system to display incorrect data. The SAASM capability within the timing system is sensitive but UNCLASSIFIED.

8. If a technologically advanced adversary were to obtain knowledge of specific hardware, the information could be used to develop countermeasures which might reduce weapons system effectiveness or be used in the development of a system with similar or advanced capabilities.

9. A determination has been made that Saudi Arabia can provide substantially the same degree

of protection for sensitive technology being released as the U.S. Government. This proposed sustainment program is necessary to the furtherance of the U.S. foreign policy and national security objectives outlined in the policy justification.

10. All defense articles and services listed on this transmittal are authorized for release and export to the Kingdom of Saudi Arabia.

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